

REMARKS/ARGUMENTS

Favorable reconsideration of this application is requested in view of the above amendments and in light of the following remarks and discussion.

Claims 21-26, 42-45, and 49 are pending. Claims 1-20, 27-41, and 46-48 are canceled, and of these claims, Claims 1-16, 27, 36-41, and 46-48 are canceled by the present amendment. Claims 21, 42, 44, and 45 are amended. Claim 49 is newly added. Support for the amendments to Claims 21 and 42-45 can be found on page 40, lines 17-21 and from page 41, line 23 through page 42, line 6, for example. Further support can be found in Fig. 14, for example. Support for newly added dependent Claim 49 can be found in the specification on page 42, lines 20-25. No new matter is added.

In the outstanding Office Action, the drawings were objected to as not depicting all of the features recited in the claims. Claims 21-23, 25, and 27 were rejected under 35 U.S.C. § 102(b) as anticipated by Watanabe et al. (Japanese Patent No. JP 06204143, herein "Watanabe"). Claims 1-5, 8-16, and 34-46 were rejected under 35 U.S.C. § 103(a) as obvious over Watanabe in view of Moslehi (U.S. Patent No. 5,846,883, herein "Moslehi"). Claim 26 was rejected under 35 U.S.C. § 103(a) as obvious over Watanabe in view of Tanaka (U.S. Patent Pub. 2004/0020599). Claim 24 was rejected under 35 U.S.C. § 103(a) as obvious over Watanabe. Claims 6 and 7 were rejected under 35 U.S.C. § 103(a) as obvious over Watanabe, Moslehi, and Hiroki et al. (U.S. Patent No. 5,536,359, herein "Hiroki").

At the outset, Applicants note with appreciation the courtesy of a personal interview granted by Primary Examiner Rudy Zervigon to Applicants' representative. In combination with the Interview Summary provided by Examiner Zervigon, the substance of the personal interview is substantially summarized below in accordance with MPEP § 713.04.

Regarding the objection to the drawings as not showing all of the features recited in the claims, that rejection is respectfully traversed by the present response.

The outstanding Office Action asserted that "a heat ray introducing passage formed through the shower head and separated from the space formed inside the shower head", "the gas introducing passage being separated from the space formed inside the shower head", and "head spaces" must be shown in the figures or the features canceled from the claims.

However, referring to Figs. 14 and 16, "the heat ray introducing passage 112 formed through the shower head 12 and separated from the head space 60A, 60B formed inside the shower head 12" and "the gas introducing passage 118 being separated from the head space 60A, 60B formed inside the shower head 12" are explicitly depicted. Additionally, "head spaces" are shown as reference characters (60A), (60B) in Figs. 1, 14 and 16. As discussed during the personal interview, Claim 21 is amended to recite a "head space" rather than a "space" formed in the shower head.

Additionally, as further discussed during the personal interview, regarding reference character "112", Applicants filed an amendment to the specification on July 20, 2007, in response to the Office Action issued on April 10, 2007, such that the reference character "112" is used to designate "heat ray introducing passage" in the specification.

Accordingly, as discussed during the personal interview, all the objections to the drawings are overcome.

Regarding the rejection of Claims 21-23, 25, and 27 as anticipated by Watanabe, that rejection is respectfully traversed by the present response. Amended independent Claim 21, recites, in part:

a shower head including a plurality of gas injection holes and a first head space and a second head space formed therein, the shower head being installed at a ceiling of the processing chamber, wherein **the first head space is separated from the second head space**, and the gas injection holes include first gas injection holes and second gas injection holes to which the first and the second gas are respectively introduced through the first and the second head space;

a **heat ray introducing passage** formed through the shower head and **separated from the first and the second head space** formed inside the shower head;

a radiation thermometer facing through a measurement window at an upper opening part of the heat ray introducing passage; and
a gas introducing passage formed inside the shower head and connected to the heat ray introducing passage to introduce an additional gas therein, the gas introducing passage being separated from the first and the second head space formed inside the shower head and the additional gas being introduced into the processing space through the heat ray introducing passage.

Accordingly, based on the results of the personal interview, Claim 21 is amended to recite a **second head space separated from a first head space**. A gas introducing passage formed inside the shower head and connected to the heat ray introducing passage to introduce an additional gas into the heat ray introducing passage. The **heat ray introducing passage is formed through the shower head and separated from the first and the second head space**. One non-limiting example of the above-noted arrangement is shown in Fig. 14.

As discussed in the personal interview, and as shown in Fig. 1-3, Watanabe does not disclose either first or second head spaces separated from a heat ray introducing passage. Rather, the space inside the showerhead in Watanabe is open to the gas introduction ports (16) and (17) and the projection area of the radiation thermometer (5). Thus, as discussed during the personal interview, amended independent Claim 21 patentably distinguishes over Watanabe for at least the reasons discussed above.

Regarding the rejection of Claims 1-5, 8-16, and 34-46 as obvious over Watanabe in view of Moslehi, that rejection is respectfully traversed by the present response. As Claims 1-5, 8-16, 34-41, and 46 are canceled, any rejection of these claims is negated.

Regarding Claims 42-45, Applicants respectfully submit that these claims depend from amended independent Claim 21 and patentably distinguish over Watanabe for at least the same reasons as Claim 21 does.

Moslehi fails to remedy the deficiencies of Watanabe with respect to Claim 21. Rather, Moslehi does not disclose a heat ray introducing passage and a gas introducing passage for the heat ray introducing passage. Thus, Moslehi does not disclose a heat ray

introducing passage and a gas introducing passage for the heat ray introducing passage separated from a first head space and a second head space which are also separated from each other as recited in amended independent Claim 21. Accordingly, no proper combination of Watanabe and Moslehi would include all the features recited in amended independent Claim 21 or Claims 42-45 depending therefrom.

Regarding the rejection of Claim 26 as obvious over Watanabe in view of Tanaka, that rejection is respectfully traversed by the present response. The outstanding Office Action relies on Tanaka for disclosure of an isolation ring. However, Tanaka does not disclose the first and second head spaces in combination with an isolated heat ray introducing passage and a gas introducing passage for the heat ray introducing passage.

Regarding the rejection of Claim 24 as obvious over Watanabe, that rejection is respectfully traversed by the present response. As discussed above, amended independent Claim 21 patentably distinguishes over Watanabe. Claim 24 depends from Claim 21 and patentably distinguishes over Watanabe for at least the same reasons Claim 21 does.

Regarding the rejection of Claims 6 and 7 as obvious over Watanabe, Moslehi, and Hiroki, as Claims 6 and 7 are canceled, Applicants respectfully submit that the rejection of Claims 6 and 7 is negated.

Newly added dependent Claim 49 depends from amended independent Claim 21 and patentably distinguishes over any proper combination of the cited references for at least the same reasons Claim 21 does.

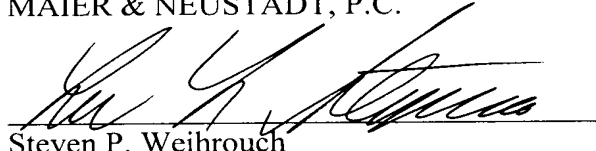
The cited references do not disclose a heat ray introducing passage and a gas introducing passage separated from a first head space and a second head space which are separated from each other as recited in amended independent Claim 21. Therefore, it is respectfully requested that the rejection of Claim 21 and any claims depending therefrom should be withdrawn.

For the foregoing reasons, it is respectfully submitted that this application is now in condition for allowance. A Notice of Allowance for Claims 21-26, 42-45, and 49 is earnestly solicited.

Should Primary Examiner Zervigon deem that any further action is necessary to place this application in even better form for allowance, he is encouraged to contact Applicants' undersigned representative at the below-listed telephone number.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Steven P. Weihrouch
Attorney of Record
Registration No. 32,829

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/07)

Lee Stepina
Registration No. 56,837